SOME NETWORK INFORMATION CENTER POLICIES ON HANDLING DOCUMENTS

Richard W. Watson and Jeanne B. North
Stanford Research Institute (ARC)

16 April 1971 RFC 115 NIC 5822

INTRODUCTION 1

The Network Information Center (NIC) seeks to facilitate the flow of information between sites on the Network and to and from other stations whose work makes them valuable as participants in the Network dialog. The NIC is concerned both with the techniques for the flow and with optimizing the content of the information itself. Some aspects of the work of the NIC in support of information flow are described here, and some suggestions made to Network participants of ways they can help this work. 1A

All information handled by the NIC is available to any Network participant. All information generated by the NIC is unclassified and is without distribution limitation except as dictated by staff and budget size. Any information sent by an originating party to the NIC for recording or distribution is presumed to be unclassified and without distribution limitations as well. Any statement carried by a document thus submitted which seems to imply a limitation on distribution, quotation, or citation is presumed not to apply to its handling by the Network Information Center. 1B

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NIC NUMBER 2

One important function of the Network Information Center is to make records of the existence of RFC's, formal NIC-related manuals and reports, Network memos, other Network informational items, and other informational items of interest to Network participants, and to index these records so that such items can be recalled when needed. 2A

To tag the informational items a serial number is assigned by NIC. The serial number has no intrinsic meaning, not even necessarily an indication of sequence of issue. It is a unique identifier and can be used to refer to the item in further communications, to facilitate indexing, and to allow numeric filing of documents. 2B

Use of the NIC number has advantages in online dialog which are not yet demonstrable around the Network, but the cooperation of Network participants in applying one when a document is originated is important. 2C

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THE NIC CATALOG 3

Items of information relevant to the Network appear in many forms, including technical reports, RFC's, brief network memos, journal articles, and letters. Reference to these is simplified by assignment of a NIC number to each. To record the item to which the NIC number refers, a description of each item, using a set of standard data elements, i.e, author, title, etc., is coded and entered as an online system (NLS) statement into a machine file. 3A

An example of a statement with typical coded data elements: 3A1

(A5480) *a1 James E. White #2 org *b2 University of California at Santa Barbara #3 Computer Research Laboratory #5 Santa Barbara, California *c1 An NCP for the ARPA Network #6 142p. *d1 21 December 1970 *f1 r *f2 o *r1 UCSB CRL 12 *31 ARPA #6 AF 19628-70-C-0314 *w2 3-11-71 *y1 Describes program designed and implemented at Santa Barbara node of ARPA Network, written in assembly language and implemented on 360/75. Discusses interface with hardware, software, and operator. *y3 Host-Interface protocol; Host-IMP protocol; User-NCP protocol; Host-Host protocol; Host-IMP messages, IMP-Host messages *z1 all *z2 NIC *z3 new * 3A1A

The group of files at ARC containing these statements of data about NIC items and other informational items is the Master Catalog. The term NIC Catalog refers to the machine file created by collecting the statements coded *z2 NIC in the Master Catalog. 3B

The data element *z1 indicates which Stations hold a copy of an item; not all items related to NIC are sent to Stations, and in the future it is expected that Stations will submit many documents to NIC for cataloging which are not held by other Stations. 3C

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NIC CATALOG LISTINGS AND INDEXES 4

Programs have been written at ARC to collect, sort, analyze and format the statements and the data elements in the statements to produce catalogs and indexes such as those in the Current Catalog of the NIC Collection, NIC (5145,). 4A

The Current Catalog of the NIC Collection is a functional document, as explained in Branch 3 below. It has as its contents, at any time, the current issue of a bibliography of items from the NIC Catalog, called a NIC Catalog Listing, and author and keyword indexes. 4B

Examples of entries in the Catalog Listing and in indexes are shown, using the statement above: 4C

Catalog Listing by Author: 4C1

An NCP for the ARPA Network 5480 White

James E. White (University of California at Santa Barbara)

21 December 1970

Describes program designed and implemented at node of ARPA Network, written in assembly language and implemented on 360/75. Discusses interface with hardware, software, and operator. 4C1A

Catalog Listing by NIC number: 4C2

An NCP for the ARPA Network 5480

James E. White (University of California at Santa Barbara)

21 December 1970

Describes program designed and implemented at node of ARPA Network, written in assembly language and implemented on 360/75. Discusses interface with hardware, software, and operator. 4C2A

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Author Index: 4C3

Subject: Education Status, memo to	5465	Westlund	
An NCP for the ARPA Network	5480	White	
NWG/RFC 78 (NCP Status Report	5199	White	4C3A

Titleword Index: 4C4

Natural Communication with Computers	5639	Natural	
An NCP for the ARPA Network	5480	Network	
Proposal for a Network Interchange	4752	Network	4C4A

A NIC Catalog Listing will indicate those items held in the Station Collections either by a separate listing or by a notation with each reference. A number catalog or index serves as a shelf list of documents held by a Station. The indexes are not limited to the Station Collections but lead to the entire NIC Catalog. 4D

DATA ELEMENTS 5

The data elements for information items include the author, title, addressee, date, other numbers, keywords, and abstract. When these elements do not exist in the item, they are supplied by a NIC cataloger if possible. In online communication around the Network, "online dialog", several of these elements of data will be recorded automatically. Lacking online recording, it is important that originators of reports, memos, and other such items be diligent in including these data in their transmissions. 5A

For memos, essential data elements which the originator should supply are:. 5A1

author(s)
address(es) of author(s)
addressee(s)
address(es) of addressee(s)
date of origination
subject of memo 5A1A

A preassigned NIC number is desirable. A number for assignment can presently be obtained by calling NIC, and soon will be obtainable online. 5A1B

The addressees of a memo can of course be a group, such as the Network Working Group, or the Glitch Cleaning Committee, in which case the NIC needs a list or reference to a list of the people in the group. 5A1C

For reports and other formal documents, essential data elements are: 5A2

author(s)
addresses of author(s)
title
date
abstract
keywords 5A2A

A short abstract, 150 to 200 words, giving some of the substance of the document is of importance in the NIC record and even for the person about to read the document. Obviously, a well-written author abstract is preferable to one produced by the NIC staff. 5A2B

Keywords supplied by the author, preferably those from a standard thesaurus, will be used in machine retrieval. When such author-assigned keywords are lacking, the NIC will supply some. Recommended sources for keywords are: 5A2C

Categories identified by Peggy Karp, Categorization and Guide to NWG/RFC's. NIC 5819. 5A2C1

American National Standard Vocabulary for Information Processing, ANSI X3.12-1970. NIC 5827. 5A2C2

Department of Defense, Thesaurus of Engineering and Scientific Terms, 1967, AD 672 000. NIC 5829. 5A2C3

NASA Thesaurus, December 1967. NASA SP-7030. NIC 5828. 5A2C4

When a document being issued supercedes an earlier document, this information is particularly important, and should be supplied by the author. 5A3

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SUBCOLLECTIONS 6

Groups of documents, such as the NWG/RFC's and the replies to Sher's survey, as well as the Station Collections, are cataloged by NIC as subcollections. That is, they are retrievable as a subset of the NIC Catalog, which in turn is a subset of a Master Catalog at ARC. The capability of making subcollections is provided for Network participants. 6A

To create a subcollection in the NIC records, a Network participant will be able to indicate to NIC the records he wishes to have so grouped, and this information will be entered in the Master Catalog statement for the document, for later retrieval. 6A1

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FUNCTIONAL DOCUMENTS 7

Several documents generated in Network activities are subject to occasional revision and updating. The NIC Catalog, the Directory of Network Participants, and the Directory of Network Resources are examples. These and external documents such as the BBN manuals are referred to by NIC as "functional documents". 7A

More generally, a functional document is a document whose title and function remain constant, but whose contents can change. A functional document contains a single or several documents which can be added to, deleted, or replaced entirely or selectively. Thus the functional document, which has a NIC number, can be referenced in other documents with some assurance that it will be in existence, even though the subdocuments with their distinctive NIC numbers may be in flux. In the Catalog, the number of a functional document in which a specific document may be contained is listed, and the current contents of each functional document is indicated. 7A1

In preparing a document which is expected to be revised, Network participants are urged to use a looseleaf format. 7A2

The Network Information Center intends to support the distribution and recording of contents of functional documents. Procedures have been established, as described below, for fitting the changes to such documents into the NIC system, and for reproducing and distributing them to individuals or stations with instructions for their integration into the existing documents. 7B

PROCEDURES FOR REVISION MATERIAL

Original manuals and other functional document materials are reproduced and distributed by NIC just as other Network publications. For all documents obtained through NIC, NIC will attempt to receive and make distribution of updates. 8A

NIC also wants to make the processes of inserting the revisions and of recording the changes as easy and foolproof as possible. The user should not only be given the current materials, but should be able to determine the version he holds, and to be able to refer to updates uniquely. The following is copied from the procedure instructions NIC has written for its own use. These procedures are also recommended to Network participants for their use in preparing revision material to be sent to NIC. 8B

Update conventions 8C

Substantial revision of a bound document, or of more than a few pages of a loose leaf document: 8C1

A new document will be published, with a new NIC number, and will bear a notation under the number on the title page and/or cover, e.g., 8C1A

NIC 5772
supercedes NIC 5621 8C1A1

Few pages inserted or revised in a looseleaf or corner-stapled document: 8C2

Each new or revised page will bear the original document number, with a notice of revision, e.g., 8C2A

NIC 5712
3-10-71 8C2A1

Inserted pages will be numbered to fit into the existing document, e.g., pages 5.1, 5.2, 5.3, may be inserted between pages 5 and 6. 8C2B

Deleted pages will be replaced by a single page indicating the deletion, e.g., 8C2C

Pages 7-12 deleted, 3-25-71 8C2C1

A new table of contents and/or title page will be issued bearing the revision notice. In addition, at the time of each revision a page or pages will be prepared and issued which indicates all additions, deletions, and revisions which bring the document up to date. 8C2D

Revisions will be made only by substitution, addition or deletion of a full page or more. NIC will not revise its own publications by lists of errata, and strongly recommends against their use by others in the Network. However, when NIC receives such lists of errata, it will reproduce and distribute them with suggestions to Station Agents for recording and inserting them. 8C3

Distribution and transmittal procedures 8D

The transmittal letter accompanying a set of revision material and the revision material itself constitute a separate document, a copy of which is filed at NIC, where a new copy can be provided at any time. 8D1

The transmittal letter will indicate the appropriate information: document number of the revision material, date, document number of the publication being updated, its date, and, when practicable, information on the changes made in the text. 8D2

Revision notation in the printed Catalogs and their indexes 8E

Catalog entry 8E1

Supercession 8E1A

The data element containing "superceded by NIC xxxx" will be formatted to appear at the beginning of the citation of the superceded document. 8E1A1

The data element containing "supercedes NIC xxxx" will be formatted to appear following the abstract in the citation. 8E1A2

Partial revision 8E1B

The data element containing the note of revision will be formatted to appear following the abstract. 8E1B1

Entries in author, titleword, or other indexes 8E2

Supercession 8E2A

The data element covering supercession will be the only text in the entry for the superceded document. 8E2A1

Supercession will not be indicated in the entry for the superceding document 8E2A2

Partial revision 8E2B

Partial revision will not be indicated in the index entry 8E2B1